

CLAIM SET AS AMENDED

1. (currently amended) A method for adjusting colors of an image, in particular of an X-ray image in which an object ~~(1)~~ having sub-objects ~~(2, 3, 4)~~ shown in different colors is depicted, comprising the steps of:

    determining an X-ray absorption attribute of a plurality of the sub-objects ~~(3, 4)~~;

A    assigning a specific color to each of the plurality of sub-objects on the basis of the X-ray absorption attribute ~~(3, 4)~~ having a same absorption attribute, each specific color being different from each other;

    adjusting a brightness level of one of the specific colors by adjusting each pixel thereof with a determined color proportion of at least one of red, green or blue ~~(R, G, B)~~, whereby the adjustment of the brightness level takes into consideration the sensitivity of the human eye; and

    displaying at least the plurality of sub-objects ~~(3, 4)~~ having the same X-ray absorption attributes on a monitor ~~(8)~~ , whereby adjustment of the brightness level of one of the specific colors causes the human eye to view at least the plurality of sub-objects ~~(3, 4)~~ as having equal brightness levels,

wherein the brightness level of at least one of the specific colors, which is assigned to a sub-object, is adjusted if the X-ray absorption attribute associated with the sub-object is substantially equal to the X-ray absorption attribute of another sub-object.

2. (currently amended) The method according to claim 1, wherein color proportions ~~(R, G, B)~~ are stored in support tables of a computer ~~(7)~~.

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3. (original) The method according to claim 1, wherein the intensity of the specific colors is increased or decreased for the brightness adjustment.

4. (currently amended) The method according to claim 1, wherein prior to the adjusting step, the method further comprises:

    determining one average atomic number of each of ~~the at least~~ the plurality of sub-objects ~~(3, 4)~~ from two different energies; and

    assigning the specific colors to the ~~at least~~ plurality of sub-objects based upon their respective average atomic number.

5. (new) The method according to claim 1, wherein the brightness level of a plurality of the specific colors, which are assigned to

their respective sub-objects, are adjusted if the X-ray absorption attribute associated with the sub-objects are substantially equal to the X-ray absorption attribute of another sub-object

6. (new) An X-ray apparatus comprising:

an X-ray beam source for producing an X-ray beam that is transmitted through an object, the object containing a plurality of ~~con~~ sub-objects;

a detector for detecting the X-ray beam;

an evaluation unit for evaluating the detected X-ray beam and determining absorption values and an average atomic number for each of the sub-objects being contained in the object, the evaluation unit further assigning a specific color to each of the sub-objects on the basis of the average atomic number and assigning a brightness level to each of the sub-objects on the basis of the absorption values; and

a display unit for displaying each of the sub-objects and their associated specific color and brightness level,

wherein the brightness level of a sub-object is adjusted if the absorption value of the sub-object is substantially equal to the absorption value of another sub-object.

7. (new) The X-ray apparatus according to claim 6, wherein the

absorption values include an absorption value in a high-energy range and an absorption value in a low-energy range of the X-ray spectrum.

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*Color* 8. (new) The X-ray apparatus according to claim 6, wherein the brightness level of the sub-object is adjusted such so that a perceived brightness level of the sub-object is substantially similar to the brightness level of the sub-object having the substantially equal absorption value.

9. (new) A method for adjusting colors of an X-ray image, the method comprising:

producing an X-ray beam that is transmitted through an object, the object containing a plurality of sub-objects;  
detecting the X-ray beam;  
determining absorption values and an average atomic number for each of the sub-objects on the basis of the detected X-ray beam transmitted through the object;  
assigning a specific color to each of the sub-objects on the basis of the average atomic number;  
assigning a brightness level to each of the sub-objects on the basis of the absorption values; and  
adjusting the brightness level of a sub-object if the

absorption value of the sub-object is substantially equal to the absorption value of another sub-object.

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10. (new) The method according to claim 9, wherein the brightness level of the sub-object is adjusted such so that a perceived brightness level of the sub-object is substantially similar to the brightness level of the sub-object having the substantially equal absorption value.